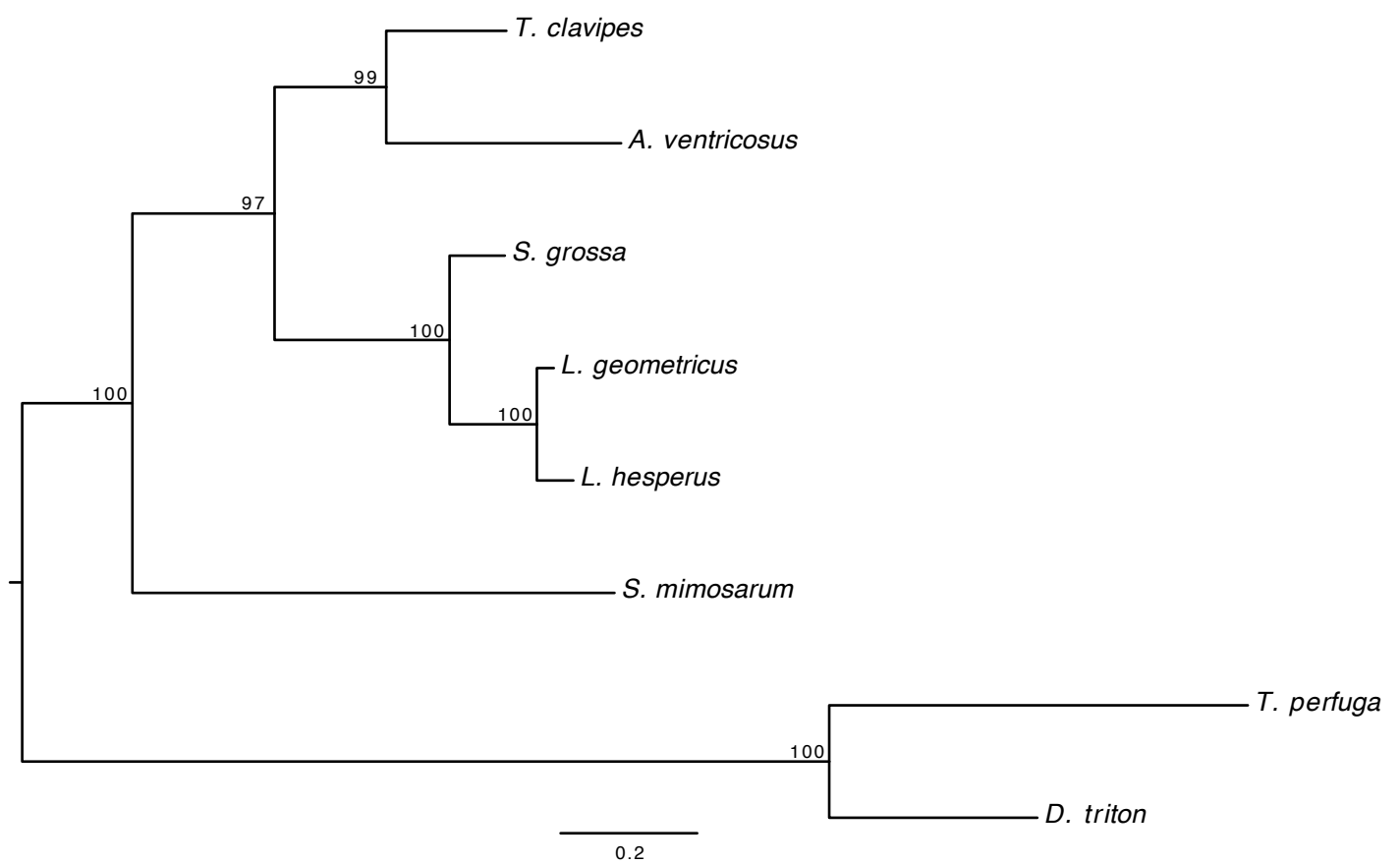


A.



B.

<i>T. clavipes</i>	1	GGANASISLFEATIASFKQRLGPELLKDKYFKTVFSDSIIPAAVSSLSAIAQFLSKAFSLPRSYLVALENDIALLVKNEITSPEAYADGISTSFINLLAA
<i>A. ventricosus</i>	1	ANVNGTLTPEDAMVLFQORLKDDLNRNRYRSVFSDSIPTAAVSNIASATAQFLSKAFKLPRSYLLNLES DITTHIRRDIAPEBYAEGVSTSFVNLLTA
<i>L. hesperus</i>	1	GKENSTLGMKEVIEVFQKLFMELLKDKYKFNFFSESVPATAVNGLASAVAQFLSKAFNIPRTYLLGLENDIKNFVKNDLTSPDAYAQGISVSLTNILTA
<i>L. geometricus</i>	1	GKENSTLGMKEAIEVFQKLFMELLKDKYKSFSESVPATAVNGLASAVAQFLSKAFNIPRTYLLGLENDIKNFVKNDLTSPDAYAQGISVSLTNILTA
<i>S. grossa</i>	1	GKGNSTLGTKEAIEVFQKLFSELLKDKYRSIFSSEVPAAAVSGLASATAQFLSKAFNVPRTYLLGLENDINNFKVNDLATPNDYAEGISVSLTNILTA
<i>S. mimosarum</i>	1	GNDLISLDLTDIIQIFQDRILAVRLLRNRYRSIFS SSIIPSVLNSVSSVITQFLAKAERTIPRSYLLTLEKNLSVSGQTDQLTVESYAQSTAAANGNIIIA
<i>T. perfluga</i>	1	ALDVDSVSHAEITLFFKIELTAELLKDKYINYLSDCIPVSALKLIASAITOYLSQAFTIPQTYILPLENVIANLFSNPNLSLRIRIEIMVDILTLLSS
<i>D. triton</i>	1	DLNVDSVSAEAIIGLFRTBLIRELLKDRYERYVFS DYVVSALKLIIAAMNQHAKAFTVPRS YLLSMENLAVNLP SDKAISPELWADIITASLTNLFSA
		0.2
<i>T. clavipes</i>	101	ANLLVPSAIGVOVGMASKAITSGLLNLYLGTYYKAVGVGLGIGSNPNYSYFSVLSGLEMLPYVGPDAVSRKYPPILKAAKASNF GAKFSKALSSNLISSSTKE
<i>A. ventricosus</i>	101	ANLLVPSAIGVOVGMASKAITSGVLFNFIATNKVAGVGLGIGSNPNYSYFSILSGLEMLPYVGPDAVSRKYPPILKAVRATNFGARFTQAMISNLISSNKE
<i>L. hesperus</i>	101	LGILSPSVIGIQITTTAAKAITGAILNFLSTSTVPGVGLSVSNPNYSYFSVLSGLEMLPYVGPDAVSRKYPPILKAAKASAFSSRFKRALYNNLISSGKE
<i>L. geometricus</i>	101	LGILSPSVIGIQITMAAKAITGAILNFLSTSTVPGVGLSVSNPNYSYFSVLSGLEMLPYVGPDAVSRKYPPILKAAKASAFSSRFKRALYNNLISSGKE
<i>S. grossa</i>	101	LGILSPSVIGIQISMASKAITGGILNFLSTSTVPGVGLSISNPNYSYFSVLSGLEMLPYVGPDAVSRKYPPILKAAKASTFSTKFKKALYSNLISSSRE
<i>S. mimosarum</i>	101	VDILTFSIIDLQASTASKAVVSAIENFLITSAPVGVGLSVNGNPNYSYFSALSGLEMLPYVGPDTISRKFPPVLKAVKASAFSSRFKALYLNLISSASRE
<i>T. perfluga</i>	101	INLITTTTARLOVATAAKAITSGIANYLGLSAIPGVGIVINRNFYLSYFSVLNGLEKLPYVGIDATSRKLPPTVLKKNANAFVQFERTILLYNLISSCNRE
<i>D. triton</i>	101	VNLITSATARLOVTMAAKAITSGIKTFIGISAIIPGVGLGINGNSYNSYFSVLNGLEKLPYVGTDAVSQKLPPIVKNAEASRFASRFTETLIFYNLISANRE
<i>T. clavipes</i>	201	SDAFLLGIPAPAWKKIAKSLGKNMAEAFGSPNPTFFSDIYANALLSVGEKLSYKTYARVLAATSKALYALGYFVSGNPNIOAAIASNAIVKGI--KSR
<i>A. ventricosus</i>	201	SDAFLLGVPAPAWKQVAQCTIGNSVAAEAFGSPNPTFFTDVYANALLSMGEKLSYKTYARVLSAATAKALYALGYFVSGNPNIOAAIAANAIKTIIV-RCQ
<i>L. hesperus</i>	201	TNVTLLGVSKPTIKNLVLSLGNVAAEAFGSPNPSYFVDSYANALLTLGTRLSYKTYAKVIAETAKALYALGYFVSGNPNIOAAIASNAIFKALQSKSR
<i>L. geometricus</i>	201	TNAFTLLGIPKPTLKNLVLISLGNVIAEAFGSPNPSYFVDSYANALLSLGPRLSYKTYAKVIAETAKALYALGYFVSGNPNIOAAIASNAIFKALQSKSR
<i>S. grossa</i>	201	SEAFLLGIPATSWKTLANS LGNVAAEAFGSPNPPFFVDSYSNALLSLGPKLSYKTYAKVIAETAKALYALGYFVSGNPNIOAAIASNAIVIKALQSKSR
<i>S. mimosarum</i>	201	CESFQLGVFVSSYKTLAITLGNVAAEAFGSPNPSYFVIDIYSKALLSSKETLDYKTSAQILAAQATAKALYALGYFVSGNPNIOAAIAANAVIRAVSRSR
<i>T. perfluga</i>	201	SDAFLLGVPFTYKMIANSLGDYMAEAFGSPNPSYFAHYVVSVMTTISKNLNHEAYARALSSSTAKALYALGYFVSGNPNIOAAIATNATIGALTTSKR
<i>D. triton</i>	201	SEAFLLGVHPLTYKIANS LGNFVAAEAFGSPSPSFSDIYTDALLISANKLNYKTYARTISLATAKALFILGYFSSGDNIOAAIAANAVIRALTEKSR

Figure S5. Phylogenetic analyses **A)** and sequence alignment **B)** of SpL_1339 central regions from *Trichonephila clavipes*, *Araneus ventricosus*, *Latrodectus hesperus*, *L. geometricus*, *Steatoda grossa*, *Stegodyphus mimorasum*, *Tengella perfuga*, and *Dolomedes triton*. Maximum likelihood analysis shows relationships that are consistent with the expected species tree, including recovery of a cob-weaver clade, an orb-weaver clade, a monophyletic cob- and orb-weaver clade, and placement of *S. mimosarum* outside of the cob- and orb-weaver clade. Bootstrap support greater than 50% is shown. Scale bar indicates substitution per site. Dashes are alignment gaps. Amino acids conserved across species shown highlighted in black. Amino acid positions for each sequence are numbered on the left.